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09/940,189	08/27/2001	Nicolas Vazquez	5150-52800	3520

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EXAMINER	
TANG, KUO LIANG J	

ART UNIT	PAPER NUMBER
2122	7

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/940,189	VAZQUEZ ET AL.	
	Examiner	Art Unit	
	Kuo-Liang J Tang	2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the application filed on 08/27/2001.

Claims 1-35 are pending and have been examined. The priority date for this application is 08/27/2001.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims (1, 19, 20), (21), (25), (27) and (35) are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims (1, 3, 8), (16), (20), (21) and (28) of co-pending Application No. 10/100,559 (hereinafter '559) respectively. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following observation.

Instant Application Claims	'559 Claim
1. A method for specifying a computer-implemented process, the method comprising:	1. A method for specifying a machine vision process, the method comprising: displaying an image on a display;

	displaying a graphical user interface on the display, wherein the graphical user interface comprises a plurality of possible image processing steps;
displaying a graphical user interface comprising a plurality of possible steps that are useable in specifying at least a portion of a process;	
	receiving user input selecting a plurality of image processing steps to be applied to the image;
receiving user input selecting a plurality of steps specifying a first portion of the process;	
	creating a process specification in response to the user input, wherein the process specification comprises the plurality of image processing steps, wherein the process specification specifies a first portion of the machine vision process; and
creating a process specification in response to the user input, wherein the process specification comprises a plurality of steps specifying a first portion of the process;	
creating a block diagram in response to user input, wherein the block diagram specifies a second portion of the process;	
	creating a block diagram in response to user input, wherein the block diagram specifies a second portion of the machine vision process;
wherein the block diagram comprises a plurality of interconnected nodes which visually indicate operation of the second	

portion of the process;	
wherein the process specification and the block diagram collectively specify the computer-implemented process.	wherein the process specification and the block diagram collectively specify the machine vision process.
19. The method of claim 1, wherein the process is a machine vision process executable to visually inspect a device; wherein the block diagram is executable to determine an inspection classification for the device, depending on execution results of the process specification.	3. The method of claim 1, wherein the plurality of image processing steps of the process specification are operable to analyze an image of a device under inspection; wherein the block diagram is operable to determine an inspection result for the device, based on values determined by the image processing steps.
20. The method of claim 1, wherein the process is executable to perform one or more of the following types of applications: a machine vision application; an image processing application; an image analysis application; a motion control application; an industrial automation application; a process control application; a test and measurement application; a	8. The method of claim 1, further comprising: executing the machine vision process, wherein the machine vision process visually inspects a device and generates a result.

simulation application.	
21. A method for specifying a computer-implemented process, the method comprising: displaying a graphical user interface (GUI), wherein the GUI includes operations that are selectable to be included in a process specification; receiving user input to the GUI, wherein the user input selects operations for inclusion in the process specification; creating the process specification in response to the user input, wherein the process specification specifies a first portion of the process; creating a block diagram in response to user input, wherein the block diagram	16. A method for specifying a machine vision process, the method comprising: displaying a graphical user interface (GUI), wherein the GUI includes machine vision operations that are selectable to be included in a process specification; receiving user input to the GUI, wherein the user input selects machine vision operations for inclusion in the process specification; creating the process specification in response to the user input, wherein the

specifies a second portion of the process;	process specification specifies a first portion of the machine vision process;
	creating a block diagram in response to user input, wherein the block diagram specifies a second portion of the machine vision process;
wherein the process specification and the block diagram collectively specify the computer-implemented process.	wherein the process specification and the block diagram collectively specify the machine vision process
25. A method for specifying a computer-implemented process, the method comprising:	20. A method for specifying a machine vision process, the method comprising:
creating a process specification in response to user input, wherein the process specification comprises a plurality of steps specifying a first portion of the process;	creating a process specification in response to user input, wherein the process specification comprises a plurality of steps specifying a first portion of the machine vision process;
creating a block diagram in response to	creating a block diagram in response to

user input, wherein the block diagram specifies a second portion of the process; wherein the block diagram comprises a plurality of interconnected nodes which visually indicate operation of the second portion of the process; wherein the process specification and the block diagram collectively specify the computer-implemented process.	user input, wherein the block diagram specifies a second portion of the machine vision process; wherein the process specification and the block diagram collectively specify the machine vision process.
27. A memory medium for specifying a computer-implemented process, the memory medium comprising program instructions executable to: display a graphical user interface comprising a plurality of possible steps that are useable in specifying at least a portion of a process; receive user input selecting a plurality of	21. A memory medium for specifying a machine vision process, the memory medium comprising program instructions executable to: display an image on a display; display a graphical user interface on the display, wherein the graphical user interface comprises a plurality of possible image processing steps; receive user input selecting a plurality of

steps specifying a first portion of the process; create a process specification in response to the user input, wherein the process specification comprises a plurality of steps specifying a first portion of the process; create a block diagram in response to user input, wherein the block diagram specifies a second portion of the process; wherein the block diagram comprises a plurality of interconnected nodes which visually indicate operation of the second portion of the process; wherein the process specification and the block diagram collectively specify the computer-implemented process.	image processing steps to be applied to the image; create a process specification in response to the user input, wherein the process specification comprises the plurality of image processing steps, wherein the process specification specifies a first portion of the machine vision process; create a block diagram in response to user input, wherein the block diagram specifies a second portion of the machine vision process; wherein the process specification and the block diagram collectively specify the machine vision process.
35. A system for specifying a computer-implemented process, the system	28. A system for specifying a machine vision process, the system comprising:

comprising: a processor; a memory storing program instructions; wherein the processor is operable to execute the program instructions to:	a processor; a memory storing program instructions; wherein the processor is operable to execute the program instructions to: display an image on a display;
display a graphical user interface comprising a plurality of possible steps that are useable in specifying at least a portion of a process; receive user input selecting a plurality of steps specifying a first portion of the process;	display a graphical user interface on the display, wherein the graphical user interface comprises a plurality of possible image processing steps; receive user input selecting a plurality of image processing steps to be applied to the image;
create a process specification in response to the user input, wherein the process specification comprises a plurality of steps specifying a first portion of the process;	create a process specification in response to the user input, wherein the process specification comprises the plurality of image processing steps, wherein the process specification specifies a first portion of the machine vision process;

create a block diagram in response to user input, wherein the block diagram specifies a second portion of the process; wherein the block diagram comprises a plurality of interconnected nodes which visually indicate operation of the second portion of the process; wherein the process specification and the block diagram collectively specify the computer-implemented process.	create a block diagram in response to user input, wherein the block diagram specifies a second portion of the machine vision process; wherein the process specification and the block diagram collectively specify the machine vision process.

The limitations recited in claims 1, 19 and 20 are obvious variations of limitation in '559 Claims 1, 3 and 8.

The limitations recited in claims 21 is obvious variations of limitation in '559 Claim 16.

The limitations recited in claim 25 is obvious variations of limitation in '559 Claim 20.

The limitations recited in claim 27 is obvious variations of limitation in '559 Claim 21.

The limitations recited in claim 35 is obvious variations of limitation in '559 Claim 28.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable by Favreau et al., US Patent No. 6,531,707 (hereinafter Favreau) in view of Marrion, Jr. et al., US Patent No. 6,408,249 (hereinafter Marrion).

As Per Claim 1, Favreau teaches that a machine vision method and system for inspecting a material. The system comprises a light source arranged to illuminate the material and an imaging device configured to acquire image data corresponding to at least one characteristic of the material while the material is being illuminated by the light source. (E.g. see Abstract and associated text). In that Favreau discloses the method that covering the steps of:

"displaying a graphical user interface (E.g. see Col. 9:39, GUI) comprising a plurality of possible steps (E.g. see Col. 9:35, instructions) that are useable in specifying at least a portion of a process" (E.g. see Col. 9:34-41);

"receiving user input selecting a plurality of steps specifying a first portion of the process" (E.g. see Col. 9:41-46, which states "...inputting information to and from a user ...");

"creating a process specification in response to the user input (E.g. see FIGS. 2-6 and associated text, e.g. Col. 9:41-52), wherein the process specification comprises a plurality of steps specifying a first portion of the process;" (E.g. see Col. 9:52-65);

Favreau doesn't explicitly disclose creating a block diagram in response to user input, wherein the block diagram specifies a second portion of the process. However Marrion, in analogous art, teaches providing "creating a block diagram in response to user input, wherein the block diagram specifies a second portion of the process (E.g. see Col. 12:20-28); wherein the block diagram comprises a plurality of interconnected nodes (E.g. see col. 12:23, nodes) which visually indicate operation of the second portion of the process (E.g. see Col. 12:20, data-flow graph); wherein the process specification and the block diagram collectively specify the computer-implemented process (E.g. see Col. 12:20-28)". Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Marrion into the system of Favreau because this would provide Favreau system with versatile tools to allow the user to graphically connect any inspection step.

As Per claim 2, the rejection of claim 1 is incorporated and further Favreau teaches:

"wherein the block diagram graphically specifies a procedure that uses values (E.g. see col. 3:7-22) determined by the first portion of the process to produce one or more results." (E.g. see col. 2:66-76 and Col. 3:1-6).

As Per claim 3, the rejection of claim 1 is incorporated and further Favreau teaches:

"wherein the block diagram graphically specifies a decision operation based on execution results determined by steps in the process specification." (E.g. see col. 3:7-22, e.g. exposure control level).

As Per claim 4, the rejection of claim 1 is incorporated and further Favreau teaches:

"including one or more steps in the process specification operable to perform a plurality of operations based on a result computed by the block diagram." (Again, see noted above of Claims 2-3, values (E.g. see col. 3:7-22) / results (E.g. see col. 2:66-76 and Col. 3:1-6)).

As Per claim 5, the rejection of claim 1 is incorporated and further Favreau teaches:

"including a step in the process specification that references the block diagram." (E.g. see col. 3:7-22, e.g. exposure control level. Change the control level requires a separate set of steps or actions under the process specification, and executing these separate actions are controlled by the block diagram).

As Per claim 6, the rejection of claim 1 is incorporated and further Favreau teaches:

"executing the process, wherein said executing comprises executing the process specification and executing the block diagram." (Again, see noted above of Claim 5).

As per Claims 7-12, the rejection of claim 1 are incorporated and are rejected under the same reason set forth in connection of the rejection of claim 1.

As per Claim 13, the rejection of claim 12 is incorporated and further Favreau teaches:

"wherein the object is an image." (E.g. see Abstract).

As per Claim 14, the rejection of claim 1 is incorporated and further Favreau teaches:

"wherein the process specification comprises a script." (E.g. see col. 10:10-14, A script can be a software that calls the run routines that executes the desired steps),

As per Claim 15, the rejection of claim 1 is incorporated and further Favreau teaches:

"wherein the process specification is stored as a computer program." (E.g. see Col. 9:41-51).

As per Claim 16, the rejection of claim 1 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 11.

As per Claim 17, the rejection of claim 1 is incorporated and further Favreau doesn't explicitly disclose creating a program portion coded in a text-based programming language in response to user input. However Marrion, in analogous art, teaches providing "creating a program portion coded in a text-based programming language in response to user input (E.g. see Col. 2:59-62, C-language)". Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Marrion into the system of Favreau, to create a program portion coded in a text-based programming language in response to user input. The modification would have been obvious because one of ordinary skill in the art would have been motivated to use C-language to create a version-based inspection program.

As per Claim 18, the rejection of claim 1 is incorporated and further Favreau teaches:

"wherein process is executable to inspect a device;" (E.g. see Abstract and FIG.1 and associated text);

"wherein the block diagram is executable to determine an inspection classification for the device, depending on execution results of the process specification." (E.g. see col. 3:7-22).

As per Claim 19, the rejection of claim 1 is incorporated and further Favreau teaches:

"wherein the process is a machine vision process executable to visually inspect a device;" (E.g. see Abstract and FIG.1 and associated text);

"wherein the block diagram is executable to determine an inspection classification for the device, depending on execution results of the process specification." (E.g. see col. 3:7-22).

As per Claim 20, the rejection of claim 1 is incorporated and further Favreau teaches:

"wherein the process is executable to perform one ... of the following types of applications: a machine vision application;" (E.g. see Abstract and FIG.1 and associated text).

As per Claim 21, Favreau teaches:

"displaying a graphical user interface (GUI) (E.g. see Col. 9:39, GUI), wherein the GUI includes operations (E.g. see Col. 9:35, instructions) that are selectable to be included in a process specification;" (E.g. see Col. 9:34-41);

"receiving user input to the GUI, wherein the user input selects operations for inclusion in the process specification;" (E.g. see Col. 9:41-46, which states "...inputting information to and from a user ...");

"creating a process specification in response to the user input (E.g. see FIGS. 2-6 and associated text, e.g. Col. 9:41-52), wherein the process specification comprises a plurality of steps specifying a first portion of the process;" (E.g. see Col. 9:52-65);

Favreau doesn't explicitly disclose creating a block diagram in response to user input, wherein the block diagram specifies a second portion of the process. However Marrion, in analogous art, teaches providing "creating a block diagram in response to user input, wherein the block diagram specifies a second portion of the process (E.g. see Col. 12:20-28); wherein the process specification and the block diagram collectively specify the computer-implemented process (E.g. see Col. 12:20-28)". Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Marrion into the system of Favreau, to create a block diagram in response to user input. The modification would have been obvious because one of ordinary skill in the art would have been motivated to allow the user to graphically connect inspection steps to each other.

As per Claims 22-24, the rejection of claim 21 are incorporated and are rejected under the same reason set forth in connection of the rejection of claims 4-6, respectively.

As per Claim 25, Favreau teaches:

"receiving user input indicating operations to be performed on an object;" (E.g. see Col. 9:41-46, which states "...inputting information to and from a user ...");

"storing a plurality of steps in a script (E.g. see col. 10:10-14, A script can be a software that calls the run routines that executes the desired steps) in response to the user input (E.g. see

FIGS. 2-6 and associated text, e.g. Col. 9:41-52), wherein each step is operable to perform an operation;" (E.g. see Col. 9:52-65)

Favreau doesn't explicitly disclose creating a block diagram in response to user input, wherein the block diagram specifies a decision operation based on execution results of the plurality of steps. However Marrion, in analogous art, teaches providing "creating a block diagram in response to user input, wherein the block diagram specifies decision operation based on execution results of the plurality of steps (E.g. see Col. 12:20-28); wherein the script (E.g. see col. 10:10-14, A script can be a software that calls the run routines that executes the desired steps) and the block diagram collectively specify the computer-implemented process (E.g. see Col. 12:20-28)". Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Marrion into the system of Favreau, to create a block diagram in response to user input. The modification would have been obvious because one of ordinary skill in the art would have been motivated to allow the user to graphically connect inspection steps to each other.

As per Claim 26, Favreau teaches:

"creating a process specification in response to the user input (E.g. see FIGS. 2-6 and associated text, e.g. Col. 9:41-52), wherein the process specification comprises a plurality of steps specifying a first portion of the process;" (E.g. see Col. 9:52-65);

Favreau doesn't explicitly disclose creating a block diagram in response to user input, wherein the block diagram specifies a second portion of the process. However Marrion, in analogous art, teaches providing "creating a block diagram in response to user input, wherein the

block diagram comprises a plurality of interconnected nodes which visually indicate operation of the second portion of the process (E.g. see Col. 12:20-28); wherein the process specification and the block diagram collectively specify the computer-implemented process (E.g. see Col. 12:20-28)". Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Marrion into the system of Favreau, to create a block diagram in response to user input. The modification would have been obvious because one of ordinary skill in the art would have been motivated to allow the user to graphically connect inspection steps to each other.

As Per Claim 27, is the memory medium claim corresponding to the method claim 1 and is rejected under the same reason set forth in connection of the rejection of claim 1. Further Favreau discloses memory (E.g. see FIG. 2-6, memory 420 and associated text).

As per Claims 28-34, the rejection of claim 27 are incorporated and are rejected under the same reason set forth in connection of the rejection of claims 4-6, 10, 12-13 and 19 respectively.

As Per Claim 35, is the system medium claim corresponding to the method claim 1 and is rejected under the same reason set forth in connection of the rejection of claim 1. Further Favreau discloses processor (E.g. see ABSTRACT).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang J Tang whose telephone number is 703-305-4866. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q Dam can be reached on 703-305-4552.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306.

TUAN DAM
SUPERVISORY PATENT EXAMINER

Kuo-Liang J. Tang

Software Engineer Patent Examiner